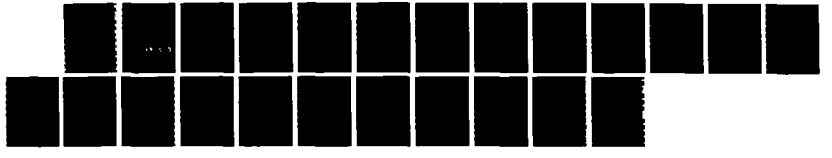
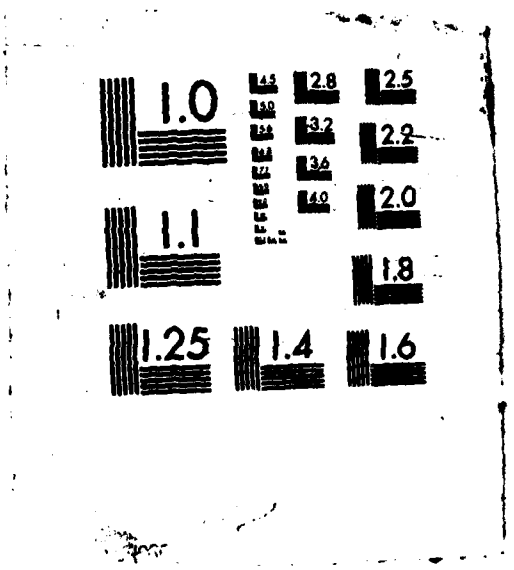
AD-A172 034 PERFORMANCE APPRAISAL FROM A PROCESS PERSPECTIVE(U) 1/1
MICHIGAN STATE UNIV EAST LANSING DEPT OF PSYCHOLOGY
D R ILGEN SEP 86 TR-86-2 N00014-83-K-0756

UNCLASSIFIED F/G 5/9 NL




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0

AD-A172 034

MICHIGAN STATE UNIVERSITY

Industrial/Organizational Psychology and Organizational Behavior

Performance Appraisal from a Process Perspective:

A Final Report

by

Daniel R. Ilgen

Michigan State University

DTIC ELECTE SEP 1 9 1986 S D A

DTIC FILE COPY

This document has been approved for public release and sale; its distribution is unlimited.

Michigan State University
East Lansing, Michigan 48824

86 9 18 0

Performance Appraisal from a Process Perspective:

A Final Report

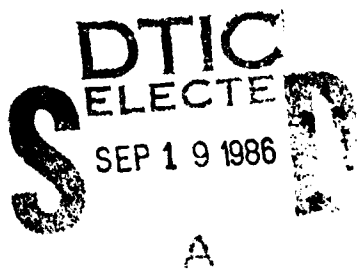
by

Daniel R. Ilgen

Michigan State University

Prepared for
Office of Naval Research
Organizational Effectiveness Unit
Code 4420E

Grant No. N00014-83-K-0756
NR 170-961



Technical Report 86-2
Department of Psychology
and
Department of Management
Michigan State University

September 1986

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER TR 86-2	2. GOVT ACCESSION NO. AD-A172 034	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Performance Appraisal from a Process Perspective: A Final Report		5. TYPE OF REPORT & PERIOD COVERED Interim
		6. PERFORMING ORG. REPORT NUMBER 2012
7. AUTHOR(s) Daniel R. Ilgen		8. CONTRACT OR GRANT NUMBER(s) N00014-83-K-0756
9. PERFORMING ORGANIZATION NAME AND ADDRESS Department of Psychology Michigan State University East Lansing, MI 48824-1117		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR170-961
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE September, 1986
		13. NUMBER OF PAGES 17
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

Approved for public release; distribution unlimited

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Performance appraisal

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The report briefly describes research conducted over three years on this grant. Also included is an appendix listing all publications to date resulting from the research.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-LF-014-6601

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Performance Appraisal from a Process Perspective: A Final Report

Performance appraisal systems play a central role in the active functioning of any large organization. The importance of such systems has become more evident as a result of an acute awareness of the need for organizations to apply personnel practices with regard to promotions, raises, job assignments, and other actions. The need for effective performance appraisal systems also increases as organizations become large and more complex. The latter affects the percentage of the workforce that can be known well by any particular manager and the percentage of the total set of tasks done by employees that a manager in any area of specialization can understand well and validly evaluate.

In spite of relevance and increasing demand for effective performance appraisal systems, by the late 1970s the ability to perfect these systems seemed to have reached a plateau--and a relatively low one at that. For the most part, work on performance appraisal up to that time had focused upon (1) the design of performance appraisal instruments or scales, and (2) the training of people to use the scales.

DTIC COPY INSPECTED

In a watershed review of the performance appraisal research through the 1970s, Landy and Farr (1980) noted the limitations of past research and stressed the need for future research that shifted the concern from rating scales and training to an investigation of the cognitive processes involved in the rating

A-1

task itself. Over the last six years, a great deal of research and theory has been driven by the orientation suggested by Landy and Farr.

The present research effort was framed within the cognitive perspective. The research was guided by a rather detailed model developed by Ilgen and Feldman (1983). The general framework of the model suggested that the rating task involved four primary subtasks. These were to (1) gather information about the ratee's performance by observing that person's behavior on the job, (2) store that information in memory, (3) retrieve information from memory when asked to rate performance, and (4) make an evaluation of performance based on the information retrieved from memory.

Most of the research supported by this grant addressed one or more of the four subtasks described above in an attempt to better understand the way in which raters process information and make performance appraisal ratings. Although a number of research methods were used, a large number of the studies involved developing video tapes of persons working on a job. The development of such films was extremely time consuming but nevertheless important for the tapes provided a constant stimulus with known properties which could be presented to raters allowing for an assessment of the effects of the known information on ratings. In some cases, the video tape stimuli were used in work simulations conducted in the laboratory, and, in other cases, the tapes were transported to field settings where experienced raters

were used in the research. In all cases, the use of such materials provided a valuable method for assessing the accuracy of ratings.

The specific studies directed at one or more of the four subtasks of the Ilgen and Feldman (1983) model will be mentioned in the paragraph that follows. There were, however, a few studies that did not fit neatly into the subtasks. The first of these was a study of the effects of allowing people to choose performance feedback rather than have it given to them automatically (Ilgen & Moore, 1983). This research showed that giving people a choice of whether or not to receive feedback can be very useful when the act of giving feedback is time consuming and performing the task in a timely manner is important. Those persons with higher ability chose feedback less frequently and, as a result, were able to do the task more quickly.

A second tangential piece by Ilgen and Wiggins (1985)* explored, from a theoretical standpoint, the effects of time on goals and goal setting processes. This discussion considered the role of performance feedback and changing motivation on performance as well as the level of goals maintained by persons who perform similar tasks for a relatively long period of time.

---

*Several of the research studies were first published as technical reports and later as articles or book chapters. For convenience, only the technical reports will be used for citation in this report.

The remainder of the published research on this project addressed one or more of the rater appraisal tasks. Each study is briefly mentioned below. In addition, all published materials on the grant up to this time are listed in an appendix to this report.

Research on the Appraisal Process

Information Gathering. Two studies dealt directly with information gathering. The first of these (Favaro & Ilgen, 1983), varied the type of information available about ratees and observed the amount of time that raters spent observing ratee performance. The results indicated that information which allowed raters to form a general impression of the ratee decreased the amount of time that the ratees were observed. This occurred even when the general impression was one that was not perceived as providing any cues about performance. It was suggested that when the information was performance relevant, the effect should be stronger and could potentially impact negatively on those people for whom negative stereotypes about their performance exist in the rater population.

A second study of information gathering by Youtz and Ilgen (1986) provided information in a dynamic mode by creating different levels of performance among ratees observed over time. It was expected that consistent performers would lead raters to feel that they knew and understood how well these individuals were performing thus decreasing the time that the raters devoted to observing performance at a later time. The data did not support this

hypothesis. The lack of support was believed to be due, in part, to the level of performance in addition to its consistency.

Storage. A study by Pulakos (1984) investigated the interaction between rating scale format and the tasks of gathering information and storing it in memory. In particular, Pulakos argued that some rating scales place great demands on information gathering in order to use them effectively. Other scales affect encoding. Pulakos used two commonly used rating formats and provided training on both information gathering and encoding/ memory. The results showed that scales do demand very different processes from raters and that ratings are more accurate when training for a scale focuses on the information processing demands implicit in the use of the scale.

In two studies directly addressing information processing, Ostroff and Ilgen (1985a & 1985b) explored the nature of the cognitive categories used to store information about employee performance. Using a sample of nurses and a video tape of a nurse performing typical nursing tasks, raters provided a description of the dimensions on which they, themselves, evaluated nurses and people in general. Results indicated that ratings were better when the personal dimensional system of the raters either matched or were highly consistent with the dimensions of the rating scale. There was also a slight indication that providing people with feedback on the match between their own personal system and that of the rating system may have been helpful.

Research on recall and evaluation focused on measures of accuracy (Youtz & Ilgen, 1986) and on rating errors (Pulakos & Schmitt, 1984; Kozlowski, Kirsch, & Chao, 1985). The first of these studies provided an evaluation of Behavioral and Classification accuracy measures while the latter looked at Halo errors.

Conclusions

The research supported on the grant provided one of the first sustained research efforts to investigate performance appraisal processes as they relate to the accuracy of ratings. The work on the information gathering stage of this process produced perhaps the clearest findings indicating that conditions do exist which influence the amount of time people spend observing the behaviors of others and suggesting ways to modify conditions or train individuals to insure more adequate sampling of behavior prior to rating.

The research on cognitive category systems used in rating was interesting from the standpoint that it represented one of the first attempts to try to assess the nature to the category systems used by raters in field settings. Prior to this time, inferences were made about the systems in terms of how they impacted on performance evaluations, but there were no attempts to assess these directly. On the other hand, the data from the present research were sufficiently unclear as to leave a number of questions with

respect to the nature of the category systems that raters possess and the effects of these categories on ratings.

Information regarding recall was gained primarily with respect to ways to assess accuracy directly and with respect to rating errors. The accuracy research was most useful with respect to indexing behavioral and classification accuracy. The rating error research focused on halo.

Finally, conducting the research revealed some things about the nature of the experimental paradigms used by us and by most others currently addressing performance appraisal processes. Ilgen and Favaro (1985) and Ilgen (1986) discussed some of the boundary conditions that appear to be necessary for research that is conducted in the laboratory for the purpose of learning about the process of performance appraisals done in the field. The major point of this research was that, for transfer, some minimum conditions must be met, and many of the social psychological research studies from which constructs are borrowed and adapted do not meet the minimum conditions.

Ostroff and Ilgen (1985a) suggested that research using the typical paradigm for assessing performance appraisal accuracy may severely underestimate the size of the effects due to restrictions in variance on the criterion measure--the measure of accuracy. Typical accuracy measures have expert judges rating video tapes in order to obtain a standard of performance based on the mean rating of the judges. If the experts do not agree, the video tapes are

rerun until the episodes on tape produce high agreement among the judges. It was argued that this process, necessary for confidence in the quality of the standard, is also likely to produce episodes on tape that are quite easily judged by any judge including a naive one. If this is so, there is likely to be little variance in accuracy measures when the measures are based on some level of agreement between naive subjects' ratings and those of the experts. This problem was raised by the authors without offering a good solution. However, it is suggested that future research needs to look closely at this potential problem and deal with it if the paradigm is to be useful.

References

Favero, J. L., & Ilgen, D. R. (1983). The effects of ratee characteristic on rater performance appraisal behavior (Tech. Rep. No. 83-5). East Lansing: Michigan State University, Departments of Psychology and Management.

Ilgen, D. R. (1985). Laboratory research: A question of when, not if (Tech. Rep. No. 85-1). East Lansing: Michigan State University, Departments of Psychology and Management.

Ilgen, D. R., & Feldman, J. M. (1983). Performance appraisal: A process focus. In B. M. Staw & L. L. Cummings (Eds.), Research in Organizational Behavior (Vol. 5). Greenwich, CT: JAI Press.

Ilgen, D. R., & Moore, C. F. (1983). Performance feedback effect under varying conditions of goals, feedback type, and choice (Tech. Rep. No. 83-6). East Lansing: Michigan State University, Departments of Psychology and Management.

Ilgen, D. R., & Youtz, M. A. (1984). Factors affecting the evaluation and development of minorities in organizations (Tech. Rep. No. 84-3). East Lansing: Michigan State University, Departments of Psychology and Management.

Ilgen, D. R., & Wiggins, A. (1985). The passage of time: A neglected factor in the goal setting-to-performance-to-feedback sequence (Tech. Rep. No. 85-3). East Lansing: Michigan State University, Departments of Psychology and Management.

Kozlowski, S. W. J., Kirsch, M. P., & Chao, G. T. (1985). Job knowledge, ratee familarity, conceptual similarity, and halo error: An exploration (Tech. Rep. No. 85-2). East Lansing: Michigan State University, Departments of Psychology and Management.

Landy, F. J., & Farr, J. L. (1980). Performance rating. Psychological Bulletin, 87, 72-107.

Ostroff, C., & Ilgen, D. R. (1985a). The effects of training on raters' accuracy and cognitive categories (Tech. Rep. No. 85-5). East Lansing: Michigan State University, Departments of Psychology and Management.

Ostroff, C., & Ilgen, D. R. (1985b). The relationship between cognitive categories of raters and rating-accuracy (Tech. Rep. No. 85-4). East Lansing: Michigan State University, Departments of Psychology and Management.

Pulakos, E. D. (1984). The development of training programs to increase accuracy of different rating formats (Tech. Rep. No. 84-2). East Lansing: Michigan State University, Departments of Psychology and Management.

Pulakos, E. D., & Schmitt, N. (1984). Operationalizing halo: Problems with the computation of a standard deviation across dimensions within ratees (Tech. Rep. No. 84-1). East Lansing: Michigan State University, Departments of Psychology and Management.

Youtz, M. A., & Ilgen, D. R. (1986). The Impact of Performance Consistency and Performance Level on Alternative Measures of Rater Accuracy (Tech. Rep. No. 86-1). East Lansing: Michigan State University, Departments of Psychology and Management.

APPENDIX

REPORTS AND PUBLICATIONS

ON

GRANT NO. N00014-83-K-0756

Contract N00014-83-K-0756
Daniel R. Ilgen, Principal Investigator

Cumulative Publication Record
Updated September 10, 1986

TECHNICAL REPORTS

2001 Favero, J. L., & Ilgen, D. R. (1983). The effects of ratee characteristics on rater performance appraisal behavior (Tech. Rep. No. 83-5). East Lansing: Michigan State University, Departments of Psychology and Management.

2002 Ilgen, D. R., & Moore, C. F. (1983). Performance feedback effect under varying conditions of goals, feedback type, and choice (Tech. Rep. No. 83-6). East Lansing: Michigan State University, Departments of Psychology and Management.

2003 Pulakos, E. D., & Schmitt, N. (1984). Operationalizing halo: Problems with the computation of a standard deviation across dimensions within ratees (Tech. Rep. No. 84-1). East Lansing: Michigan State University, Departments of Psychology and Management.

2004 Pulakos, E. D. (1984). The development of training programs to increase accuracy of different rating formats (Tech. Rep. No. 84-2). East Lansing: Michigan State University, Departments of Psychology and Management.

2005 Ilgen, D. R., & Youtz, M. (1984). Factors affecting the evaluation and development of minorities in organizations (Tech. Rep. No. 84-3). East Lansing: Michigan State University, Departments of Psychology and Management.

2006 Ilgen, D. R. (1985). Laboratory research: A question of when, not if (Tech. Rep. No. 85-1). East Lansing: Michigan State University, Departments of Psychology and Management.

2007 Kozlowski, S. W. J., Kirsch, M. P., & Chao, G. T. (1985). Job knowledge, ratee familarity, conceptual similarity, and halo error: An exploration (Tech. Rep. No. 85-2). East Lansing: Michigan State University, Departments of Psychology and Management.

2008 Ilgen, D. R., & Wiggins, A. (1985). The passage of time: A neglected factor in the goal setting-to-performance-to-feedback sequence (Tech. Rep. No. 85-3). East Lansing: Michigan State University, Departments of Psychology and Management.

2009 Ostroff, C., & Ilgen, D. R. (1985b). The relationship between cognitive categories of raters and rating-accuracy (Tech. Rep. No. 85-4). East Lansing: Michigan State University, Departments of Psychology and Management.

2010 Ostroff, C., & Ilgen, D. R. (1985a). The effects of training on raters' accuracy and cognitive categories (Tech. Rep. No. 85-5). East Lansing: Michigan State University, Departments of Psychology and Management.

2011 Youtz, M. A., & Ilgen, D. R. (1986). The Impact of Performance Consistency and Performance Level on Alternative Measures of Rater Accuracy (Tech. Rep. No. 86-1). East Lansing: Michigan State University, Departments of Psychology and Management.

ARCHIVAL PUBLICATIONS

1. Ilgen, D. R. (1984). Performance evaluation. Encyclopedia of psychology. New York: Wiley.

2. Ilgen, D. R., & Barnes-Farrell, J. (1984). Performance planning and evaluation. In F. Kast & J. Rosensweig (Eds), Modules in Management. Chicago: Science Research Associates.

3. Ilgen, D. R., & Favero, J. L. (1985). Methodological limitations of social psychological literatures for the understanding of performance appraisal processes. Academy of Management Review, 10, 311-321.

4. Pulakos, E. D., Schmitt, N., & Ostroff, C. (1986). A warning about the use of a standard deviation across dimensions within ratees to measure halo. Journal of Applied Psychology, 71, 29-32.

5. Ilgen, D. R., & Youtz, M. A. (1986). Factors affecting the evaluation and development of minorities in organizations. In K. M. Rowland & G. R. Ferris (Eds.), Research in Personnel and Human Resources Management Vol 4. Greenwich, CT: JAI Press.

6. Ilgen, D. R. (1985). Laboratory research in organizational behavior: A question of when, not if. In E. A. Locke (Ed.), Laboratory research in organizational behavior. New York: Earlbaum.

7. Ilgen, D. R. (in press). Small groups in an individualistic world. Interfaces in Psychology Vol. V. Lubbock, TX: Texas Tech University Press.

8. Ilgen, D. R., Wiggins, A. (1986). The passage of time: A neglected factor in the goal setting-performance-feedback sequence. Revista Interamerican de Psychologia Occupacional.

LIST 1 MANDATORY*

Defense Technical Information Center (12)
ATTN: DTIC DDA-2
Selection & Preliminary Cataloging Section
Cameron Station
Alexandria, VA 22314

Library of Congress
Science and Technology Division
Washington, DC 20540

Office of Naval Research (3)
Code 4420E
800 N. Quincy Street
Arlington, VA 22217

Naval Research Laboratory (6)
Code 2627
Washington, DC 20375

Office of Naval Research
Director, Technology Programs
Code 200
800 N. Quincy Street
Arlington, VA 22217

LIST 2 ONR FIELD

Psychologist
Office of Naval Research
Detachment, Pasadena
1030 East Green Street
Pasadena, CA 91106

LIST 3 OPNAV

Deputy Chief of Naval Operations
(Manpower, Personnel & Training)
Head, Research, Development, and
Studies Branch (OP-115)
1812 Arlington Annex
Washington, DC 20350

Director
Civilian Personnel Division (OP-14)
Department of the Navy
1803 Arlington Annex
Washington, DC 20350

Deputy Chief of Naval Operations
(Manpower, Personnel, & Training)
Director, Human Resource Management
Plans & Policy Branch (OP-150)
Department of the Navy
Washington, DC 20350

LIST 4 NAVMAT & NPRDC

Program Administrator for Manpower,
Personnel, and Training
MAT-0722
800 N. Quincy Street
Arlington, VA 22217

Naval Material Command
Management Training Center
NAVMAT 09M32
Jefferson Plaza, Bldg #2, Rm 150
1421 Jefferson Davis Highway
Arlington, VA 20360

Naval Personnel R&D Center (4)
Technical Director
Director, Manpower & Personnel
Laboratory, Code 06
Director, System Laboratory, Code 07
Director, Future Technology, Code 41
San Diego, CA 92152

*Number in parentheses is the number of copies to be sent.

Navy Personnel R&D Center
Washington Liaison Office
Ballston Tower #3, Rm 93
Arlington, VA 22217

LIST 5 BUMED

NONE

LIST 6
NAVAL ACADEMY AND NAVAL POSTGRADUATE SCHOOL

Naval Postgraduate School (3)
ATTN: Chairman, Dept. of
Administrative Science
Department of Administrative Sciences
Monterey, CA 93940

U.S. Naval Academy
ATTN: Chairman
Department of Leadership & Law
Stop 7-B
Annapolis, MD 21402

LIST 7 HRM

Officer in Charge
Human Resource Management Division
Naval Air Station
Mayport, FL 32228

Human Resource Management School
Naval Air Station Memphis (96)
Millington, TN 38054

Commanding Officer
Human Resource Management School
Naval Air Station Memphis
Millington, TN 38054

LIST 8 NAVY MISCELLANEOUS

Naval Military Personnel Command (2)
HRM Department (NMPC-6)
Washington, DC 20350

LIST 9 USMC

Headquarters, U.S. Marine Corps
ATTN: Scientific Adviser,
Code RD-1
Washington, DC 20380

LIST 10 OTHER FEDERAL GOVERNMENT

Dr. Brian Usilaner
GAO
Washington, DC 20548

Social and Developmental Psychology
Program
National Science Foundation
Washington, DC 20550

Office of Personnel Management
Office of Planning and Evaluation
Research Management Division
1900 E. Street, NW
Washington, DC 20415

LIST 11 ARMY

Technical Director (3)
Army Research Institute
5001 Eisenhower Avenue
Alexandria, VA 22333

Head, Department of Behavior
Science and Leadership
U.S. Military Academy
New York 10996

LIST 12 AIR FORCE

Air University Library
LSE 76-443
Maxwell AFB, AL 36112

Head, Department of Behavioral
Science and Leadership
U.S. Air Force Academy
Colorado 80840

LIST 13 MISCELLANEOUS

Dr. Eduardo Salas
Human Factors Division
Code 712
Navy Training Systems Center
Department of the Navy
Orlando, FL 32813-7100

LIST 14 CURRENT CONTRACTORS

Dr. Janet L. Barnes-Farrell
Department of Psychology U-20
University of Connecticut
406 Cross Campus Road
Storrs, CT 06268

Jeanne M. Brett
Northwestern University
Graduate School of Management
2001 Sheridan Road
Evanston, IL 60201

Dr. Terry Connolly
Georgia Institute of Technology
School of Industrial & Systems
Engineering
Atlanta, GA 30332

Dr. Richard Daft
Texas A&M University
Department of Management
College Station, TX 77843

Dr. Randy Dunham
University of Wisconsin
Graduate School of Business
Madison, WI 53706

Dr. Lawrence R. James
School of Psychology
Georgia Institute of Technology
Atlanta, GA 30332

Dr. J. Richard Hackman
School of Organization & Management
Box 1A
Yale University
New Haven, CT 06520

Dr. Frank J. Landy
Department of Psychology
Pennsylvania State University
450 Moore Bldg.
University Park, PA 16802

Dr. Bibb Latane
University of North Carolina
at Chapel Hill
Manning Hall 026A
Chapel Hill, NC 27514

Dr. Edward E. Lawler III
Graduate School of Business
University of Southern California
Los Angeles, CA 90007

Dr. William H. Mobley
College of Business Administration
Texas A&M University
College Station, TX 77843

Dr. Thomas M. Ostrom
The Ohio State University
Department of Psychology
404C West 17th Avenue
Columbus, OH 43210

Dr. Robert Rice
Department of Psychology
SUNY - Buffalo
Buffalo, NY 14226

Dr. Benjamin Schneider
Department of Psychology
University of Maryland
College Park, MD 20742

Dr. H. Wallace Sinaiko
Program Director, Manpower Research
and Advisory Services
Smithsonian Institution
801 N. Pitt Street, Suite 120
Alexandria, VA 22314

Dr. Richard M. Steers
Graduate School of Management
University of Oregon
Eugene, OR 97403

Dr. Harry C. Triandis
Department of Psychology
University of Illinois
Champaign, IL 61820

Dr. Anne S. Tsui
Duke University
The Fuqua School of Business
Durham, NC 27706

Andrew H. Van de Ven
University of Minnesota
Office of Research Administration
1919 University Avenue
St. Paul, MN 55104

END

10-86

DTIC